

**IN THE CLAIMS:**

Please amend the claims as follows.

Claims 1-4 (Canceled).

Claim 5 (Currently Amended): An information record medium readable by an information reproducing apparatus, the information record medium including a first recording layer on which a data group is recorded; and a second recording layer on which a data group is recorded, wherein on the first recording layer, a lead-in area is formed and[[,]] management information for the whole of recording information, and the data group are recorded; on the second recording layer, a lead-out area is formed and a data group are is recorded; the lead-in area ~~is recorded~~ formed at the inner radius side of the information record medium; and the lead-out area ~~is recorded~~ formed at the inner radius side of the information record medium, the information record medium further comprising:

a mid area at the outer radius side of the first recording layer; and  
another mid area at the outer radius side of the second recording layer.

Claim 6 (Canceled).

Claim 7 (Previously Presented): The information record medium according to claim 5, wherein the first recording layer comprises the lead-in area, the management information, the data group, and the mid area in that order from the inner radius side of the first recording layer.

Claim 8 (Previously Presented): The information record medium according to claim 5, wherein the second recording layer comprises the mid area, the data group, and the lead-out area in that order from the outer radius side of the second recording layer.

Claim 9 (Previously Presented): The information record medium according to claim 5, wherein the data group comprises: control data; and at least either video information or audio information.

Claim 10 (Currently Amended): A recording apparatus comprising: a signal processing device which generates additional information including a data group and management information for the whole of recording information; and a recording device which records, after a lead-in area, the management information[[,]] and a data group on a first recording layer of an information record medium and records, after a lead-out area, ~~and~~ a data group on a second recording layer of the information record medium,

wherein the ~~recording device records the~~ lead-in area is formed at the inner radius side of the information record medium, and ~~records the~~ lead-out area is formed at the inner radius side of the information record medium,

wherein the ~~recording device records~~ a mid area is formed at the outer radius side of the first recording layer, and ~~records another mid area~~ is formed at the outer radius side of the second recording layer.

Claim 11 (Canceled).

Claim 12 (Previously Presented): The recording apparatus according to claim 10, wherein the first recording layer comprises the lead-in area, the management information, the data group, and the mid area in that order from the inner radius side of the first recording layer.

Claim 13 (Previously Presented): The recording apparatus according to claim 10, wherein the second recording layer comprises the mid area, the data group, and the lead-out area in that order from the outer radius side of the second recording layer.

Claim 14 (Previously Presented): The recording apparatus according to claim 10, wherein the data group comprises: control data; and at least either video information or audio information.

Claim 15 (Currently Amended): A recording method comprising: a signal processing process for generating additional information including a data group and management information for the whole of recording information; and a recording process for recording, after a lead-in area, the management information[[,]] and a data group on a first recording layer of an information record medium and for recording, after a lead-out area, ~~and~~ a data group on a second recording layer of the information record medium,

wherein ~~the recording process records~~ the lead-in area is formed at the inner radius side of the information record medium, and ~~records~~ the lead-out area is formed at the inner radius side of the information record medium,

wherein ~~the recording process records~~ a mid area is formed at the outer radius side of the first recording layer, and ~~records~~ another mid area is formed at the outer radius side of the second recording layer.

Claim 16 (Canceled).

Claim 17 (Previously Presented): The recording method according to claim 15, wherein the first recording layer comprises the lead-in area, the management information, the data group, and the mid area in that order from the inner radius side of the first recording layer.

Claim 18 (Previously Presented): The recording method according to claim 15, wherein the second recording layer comprises the mid area, the data group, and the lead-out area in that order from the outer radius side of the second recording layer.

Claim 19 (Previously Presented): The recording method according to claim 15, wherein the data group comprises: control data; and at least either video information or audio information.

Claim 20 (Previously Presented): The information record medium according to claim 5,  
wherein said data group comprises control data and substantive information,  
said substantive information comprising a plurality of cells,  
said control data comprising information relating to a program chain which is a logical  
unit comprising a combination of a plurality of programs, said programs comprising a  
combination of said cells,  
said cell comprising a plurality of video object units,  
said video object units comprising at least one of a navigation pack, a video pack, an  
audio pack, and a sub picture pack,  
said navigation pack comprising a packet of search information and a packet relating to  
display control,  
said video packet comprising a video packet,  
said audio packet comprising an audio packet, and  
said sub picture pack comprising a sub picture packet.

Claim 21 (Previously Presented): The recording apparatus according to claim 10,  
wherein said data group comprises control data and substantive information,  
said substantive information comprising a plurality of cells,  
said control data comprising information relating to a program chain which is a logical  
unit comprising a combination of a plurality of programs, said programs comprising a  
combination of said cells,  
said cell comprising a plurality of video object units,

said video object units comprising at least one of a navigation pack, a video pack, an audio pack, and a sub picture pack,

said navigation pack comprising a packet of search information and a packet relating to display control,

said video packet comprising a video packet,

said audio packet comprising an audio packet, and

said sub picture pack comprising a sub picture packet.

Claim 22 (Previously Presented): The recording method according to claim 15, wherein said data group comprises control data and substantive information, said substantive information comprising a plurality of cells, said control data comprising information relating to a program chain which is a logical unit comprising a combination of a plurality of programs, said programs comprising a combination of said cells,

said cell comprising a plurality of video object units,

said video object units comprising at least one of a navigation pack, a video pack, an audio pack, and a sub picture pack,

said navigation pack comprising a packet of search information and a packet relating to display control,

said video packet comprising a video packet,

said audio packet comprising an audio packet, and

said sub picture pack comprising a sub picture packet.

Claim 23 (Currently Amended): An information record medium readable by an information reproducing apparatus, the information record medium including a first recording layer on which a data group is recorded; and a second recording layer on which a data group is recorded, the information record medium further comprising:

on the first recording layer, a lead-in area is formed, the data group is recorded, and a mid area is formed ~~recorded~~ in a direction from the inner radius side of the information record medium to the outer radius side of the information record medium; and

on the second recording layer, a lead-out area is formed, a data group is recorded, and~~[[,]]~~ a mid area is formed ~~and a data group recorded~~ in a direction from the inner radius side of the information record medium to the outer radius side of the information record medium.

Claim 24 (Previously Presented): The information record medium according to claim 23, wherein said data group comprises control data and substantive information,

said substantive information comprising a plurality of video object units,

said control data comprising information relating to a program which is a logical unit comprising a combination of a plurality of video object units,

said video object units comprising at least one of a video pack, an audio pack, and a sub picture pack,

said video packet comprising a video packet,

said audio packet comprising an audio packet, and

said sub picture pack comprising a sub picture packet.

Claim 25 (Currently Amended): A recording apparatus comprising: a signal processing device which generates additional information including a data group; and a recording device which records, after a lead-in area, ~~and~~ a data group on a first recording layer of an information record medium and records, after a lead-out area, ~~and~~ a data group on a second recording layer of the information record medium,

wherein ~~the recording device records~~ the lead-in area is formed at the inner radius side of the information record medium, and ~~records~~ the lead-out area is formed at the inner radius side of the information record medium,

wherein ~~the recording device records~~ a mid area is formed at the outer radius side of the first recording layer, and ~~records~~ another mid area is formed at the outer radius side of the second recording layer.

Claim 26 (Previously Presented): The recording apparatus according to claim 25, wherein said data group comprises control data and substantive information,

said substantive information comprising a plurality of video object units,

said control data comprising information relating to a program which is a logical unit comprising a combination of a plurality of video object units,

said video object units comprising at least one of a video pack, an audio pack, and a sub picture pack,

said video packet comprising a video packet,

said audio packet comprising an audio packet, and

said sub picture pack comprising a sub picture packet.



Claim 27 (Currently Amended): A recording method comprising: a signal processing process for generating additional information including a data group; and a recording process for recording, after a lead-in area, ~~and~~ a data group on a first recording layer of an information record medium and for recording, after a lead-out area, ~~and~~ a data group on a second recording layer of the information record medium,

wherein ~~the recording process records~~ the lead-in area is formed at the inner radius side of the information record medium, and ~~records~~ the lead-out area is formed at the inner radius side of the information record medium,

wherein ~~the recording process records~~ a mid area is formed at the outer radius side of the first recording layer, and ~~records~~ another mid area is formed at the outer radius side of the second recording layer.

Claim 28 (Previously Presented): The recording method according to claim 27, wherein said data group comprises control data and substantive information,

said substantive information comprising a plurality of video object units,

said control data comprising information relating to a program which is a logical unit comprising a combination of a plurality of video object units,

said video object units comprising at least one of a video pack, an audio pack, and a sub picture pack,

said video packet comprising a video packet,

said audio packet comprising an audio packet, and

said sub picture pack comprising a sub picture packet.